

Claims:

1. A physiological food salt product containing an alkaline earth metal component, **characterized** in that said product contains one or more hydrate forms of magnesium ammonium chloride and/or calcium ammonium chloride having the general formula  $MNH_4Cl_3 \times XH_2O$ , in which formula M is Mg or Ca and X is the number of molecules of water of crystallization.
- 10 2. The product according to claim 1, **characterized** in that X is within the range from 4 to 6.
- 15 ~~3. The product according to claim 1 or 2, **characterized** in that the magnesium ammonium chloride and/or the calcium ammonium chloride is in a complex form.~~
- 20 4. The product according to claim 3, **characterized** in that the complexing compound is a hydroxy-carboxylic acid and/or its salt, or an amino acid and/or its derivative.
- 25 ~~5. The product according to claim 1 or 2, **characterized** in that the general anhydrous formula of the salt contained in the product is  $aMg \times bCa \times NH_4Cl_3$ , in which  $a + b = 1$ , and a and b are greater than 0, and in which part of the ammonium can be replaced with potassium.~~
- 30 6. The product according to claim 1 or 2, **characterized** in that the general anhydrous formula of the salt contained in the product is in the type  $MgNH_4Cl_3 \times eCaCl_2$ , in which e is preferably not greater than 0.2 and in which part of the ammonium can be replaced with potassium.
- 35 7. The product according to claim 1 or 2, **characterized** in that the general anhydrous formula of the salt contained in the product is  $Mg \times cNH_4 \times dK \times Cl_3$ , in which  $c + d = 1$ , and c and d are greater than 0, preferably so that  $c \geq 0.5$ .
8. The product according to any of the preceding claims, **characterized** in that it contains sodium chloride and/or potassium chloride.

9. The product according to claim 8, **characterized** in that the content of magnesium ammonium chloride in the mixture is at least 2.5 wt-%, preferably at least 3.0 wt-%, calculated as magnesium.

5

*13 Sub* 10. The product according to any of the preceding claims, **characterized** in that it contains materials which are advantageous to vital functions, such as micronutrients, vitamins, flavonoids, steroids, or the like.

10

11. The product according to any of the preceding claims, **characterized** in that it contains as additives affecting primarily the taste of the product carbohydrates or their polymeric forms, spices, herbs, acidity regulators, glutamates, proteins, protein hydrolysates, or the like.

15

12. A nutrient substance, a semi-finished product, a processed food product, a food portion, *or the like*, **characterized** in that a food salt product according to any of the preceding claims has been used, in solid form or in a solution, in its processing and/or preservation.

20

13. A method for preparing a food salt product containing an alkaline earth metal component, **characterized** in that an alkaline earth metal chloride and ammonium chloride are brought together in a solution form, wherein a precipitate is formed which contains one or several hydrate forms of an alkaline earth metal ammonium chloride, having the general formula of  $MNH_4Cl_3 \times XH_2O$ , in which formula M is Mg or Ca and X is the number of molecules of water of crystallization, and the obtained precipitate is separated from the mother liquor.

25

14. The method according to claim 13, **characterized** in that the precipitation is performed in a continuous process, returning the mother liquor after the separation of the precipitate to the stage in which it is supplemented with the alkaline earth metal chloride and ammonium chloride.

30

15. The method according to claim 13, **characterized** in that the solution form contains both magnesium chloride and calcium chloride to include calcium in the product.

*R**→  
redun*

16. The method according to claim 13, characterized in that the solution form contains a chloride of potassium, such as KCl, or potassium carnallite MgKCl<sub>3</sub> which also constitutes the alkaline earth metal chloride component.

5

17. The method according to any of the preceding claims 13 to 16, characterized in that the pH of the mother liquor is adjusted by means of a hydroxide, particularly potassium or ammonium hydroxide, particularly to adjust the crystallization of free ammonium chloride.

10

18. A method for preparing a physiological food salt product containing an alkaline earth metal component, characterized in that an alkaline earth metal chloride and ammonium chloride are brought together in a solid state possibly together with sodium chloride and/or potassium chloride, and the mixture is agitated, ground, or pulverized e.g. in a ball mill or the like, and the obtained product is possibly granulated.

15